

Table 21. Cotton insect loss estimates for Tennessee during 2024.

Pest	Acres Infested	% Acres Infested	Acres Treated	% Acres Treated	# of apps /acres treated	Cost of 1 application	% loss /acre infested	# of apps/ total acres	cost/acre	overall % reduction	Bales lost / pest	Loss + cost	Loss + cost/acre	% Total Loss+Cost
Bollworm/Budworm	270,000	100.0%	4,320	1.6%	1.0	\$21.00	1.50%	0.02	\$0.42	1.50%	12,099	\$4,178,664	\$15.48	7.0%
Beet Armyworm	2,700	1.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Fall Armyworm	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Loopers	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Cutworms	2,700	1.0%	1,350	0.5%	1.0	\$8.00	0.00%	0.01	\$0.08	0.00%	0	\$216	\$0.00	0.0%
Cotton Leaf Perforator	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Saltmarsh Caterpillar	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Lygus	270,000	100.0%	270,000	100.0%	5.0	\$17.00	5.50%	5.00	\$85.00	5.50%	44,364	\$37,856,304	\$140.21	63.6%
Cotton Fleahopper	2,700	1.0%	2,700	1.0%	1.0	\$10.00	0.05%	0.01	\$0.10	0.00%	8	\$2,958	\$0.01	0.0%
Stink Bugs (other than brown stink bug)	270,000	100.0%	135,000	50.0%	1.0	\$11.00	0.50%	0.50	\$5.50	0.50%	4,033	\$2,840,088	\$10.52	4.8%
Brown Stink Bug	229,500	85.0%	270,000	100.0%	1.0	\$11.00	0.50%	1.00	\$11.00	0.43%	3,428	\$3,676,308	\$13.62	6.2%
Clouded Plant Bug	270,000	100.0%	256,500	95.0%	1.5	\$12.00	0.50%	1.43	\$17.16	0.50%	4,033	\$5,988,288	\$22.18	10.1%
Leaf Footed Bugs	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Spider Mites	135,000	50.0%	40,500	15.0%	1.0	\$12.50	0.10%	0.15	\$1.88	0.05%	403	\$388,533	\$1.44	0.7%
Thrips	270,000	100.0%	67,500	25.0%	1.0	\$15.00	1.00%	0.25	\$3.75	1.00%	8,066	\$3,722,676	\$13.79	6.3%
Aphids	270,000	100.0%	67,500	25.0%	1.0	\$12.50	0.01%	0.25	\$3.13	0.01%	81	\$870,966	\$3.23	1.5%
Grasshoppers	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Banded Winged Whitefly	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Silverleaf Whitefly	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
Boll Weevil	0	0.0%	0	0.0%	0.0	\$0.00	0.00%	0.00	\$0.00	0.00%	0	\$0	\$0.00	0.0%
<b>TOTAL</b>					8.62				\$128.01	9.49%	76,515	\$59,525,001	\$220.46	

**SUMMARY DATA**

Data Input		Yield and Management Results				Economic Results	
State	Tennessee	Total Acres	270,000			Total	Per Acre
Region	Midsouth	Total Bales Harvested	520,313			Foliar Insecticide Costs	\$34,562,700
Year	2024	Total Bales Lost to Insects	76,515			Seed Treatment Costs	\$2,970,000
Total Acres (Upland)	270,000	Percent Yield Loss	9.5%			In-Furrow Costs	\$54,000
Yield / Acre (Upland)	925	Yield w/o Insects (lb/acre)	1,022			Scouting Costs	\$2,911,275
Price / lb	\$0.70	Av. # Applications	8.62			Eradication Costs	\$270,000
yield potential (lb/acre)	1,434	Total Bales lost (all factors)	286,239			Bt Cotton	\$11,178,000
Acres (Pima)	0	Total % yield Loss	35.5%			Total Costs	\$51,945,975
Yield / Acre (Pima)	0	Transgenic Cotton (arthropods) (# acres)	270,000			Yield Loss to Insects	\$25,709,040
% Acres Scouted	95%	Boll Weevil Eradication (# acres)	270,000			Total Losses + Costs	\$77,655,015
Fee / Scouted Acre	\$11.35	Pink Bollworm Eradication (# acres)	0				
No. times scouted/week	1.5	# Scouted Acres	256,500				
% acres Transgenic (Bt) Cotton	100%	Seed Treatments (arthropods) (# acres)	270,000				
Cost/treated acre (Bt) Cotton	\$41.40	In-Furrow Applications (# acres)	5,400				
% acres with seed treatment	100%	Applications by Air (acres)	81,000				
Seed trt. cost/ treated acre	\$11.00	Applications by Ground (acres)	270,000				
% acres with in-furrow	2%	No. acres with no foliar insecticide applications	0				
		% loss to other (chemical injury, weeds, diseases, etc.)	3.0%				

Table 21. Cotton insect loss estimates for Tennessee during 2024, continued.

Upland Cotton	% Acres	# Acres	Total cost/acre	Bt cost/acre	% acres treated for BW/TBW	# acres treated for BW/TBW	# apps for BW/TBW
Bollgard II	2.0%	5,400	\$140.00	\$24.00	80%	4,320	1.0
Bollgard III	25.0%	67,500	\$150.00	\$26.00	0%	0	0.0
Bollgard III/Thryvon	65.0%	175,500	\$170.00	\$26.00	0%	0	0.0
WideStrike	0.0%	0	\$0.00	\$0.00	0%	0	0.0
WideStrike 3	7.0%	18,900	\$120.00	\$24.00	0%	0	0.0
TwinLink	0.0%	0	\$0.00	\$0.00	0%	0	0.0
TwinLink Plus	1.0%	2,700	\$130.00	\$24.00	0%	0	0.0
<b>Total Bt</b>	<b>100.0%</b>	<b>270,000</b>	<b>\$160.50</b>	<b>\$41.40</b>	<b>1.6%</b>	<b>4,320</b>	<b>0.0</b>
Herbicide Traits Only	0.0%	0	\$0.00	-	0%	0	0.0
Conventional	0.0%	0	\$0.00	-	0%	0	0.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
<b>Total Upland Cotton</b>	<b>100.0%</b>	<b>270,000</b>	<b>\$160.50</b>	<b>\$41.40</b>	<b>1.6%</b>	<b>4,320</b>	<b>0.0</b>
<b>Non Upland Cotton</b>							
Pima	0.0%	0	\$0.00	-	0%	0	0.0
Other	0.0%	0	\$0.00	-	0%	0	0.0
Organic	0.0%	0	\$0.00	-	0%	0	0.0
<b>Total (all Cotton)</b>		<b>270,000</b>	<b>\$160.50</b>		<b>1.6%</b>	<b>4,320</b>	<b>0.0</b>

  

Upland Cotton	% acres treated for Thrips	# acres treated for Thrips	# apps for Thrips	Thryvon Bt cost/acre	% acres treated for Lygus	# acres treated for Lygus	# apps for Lygus
Bollgard III/Thryvon	1.0%	1755	1.0	\$24.00	98.0%	171,990	2.0